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Bibliography #13

Mobile Treatment Units

November 2001

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Policy Research Associates, Inc. • 345 Delaware Avenue, Delmar, New York 12054
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2001

Guo S; Biegel DE; Johnsen JA; Dyches H. **Assessing the impact of community-based mobile crisis services on preventing hospitalization.** Psychiatric Services (Special Issue), 52(2):223-8, Feb 2001.

OBJECTIVE: This study evaluated the impact of a community–based mobile crisis intervention program (CIP) on the rate and timing of the rate and timing of psychiatric hospitalization and explored major consumer characteristics related to the likelihood of hospitalization. METHODS: A CIP cohort was matched with a hospital-based cohort on 7 variables: gender, race, age at the time of crisis service (mean 35.7 yrs), primary diagnosis, recency of prior services use, substance abuse, and severe mental disability certification status. The matching process resulted in treatment and comparison groups, each consisting of 1,100 subjects. Differences in hospitalization rate and timing between the two groups were assessed. RESULTS: CIP reduced the hospitalization rate by 8%. Subjects using a hospital-based intervention were 51% more likely than subjects using a CIP to be hospitalized within the 30 days after the crisis. Treating a greater proportion of clients in the community rather than hospitalizing them did not increase the risk of subsequent hospitalization. Ss most likely to be hospitalized were young, homeless, and experiencing acute problems; they were referred by psychiatric hospitals, the legal system, or other treatment facilities; they showed signs of substance abuse, had no income, and were severely mentally disabled. CONCLUSIONS: Results indicated that community-based mobile crisis services resulted in a lower rate of hospitalization than hospital-based interventions. Consumer characteristics were also associated with the risk of hospitalizations.

Morris DW, Warnock JK. **Effectiveness of a mobile outreach and crisis services unit in reducing psychiatric symptoms in a population of homeless persons with severe mental illness.** J Okla State Med Assoc, 94(8):343-6, Aug 2001.

The purpose of this study was to use a time-lag design to evaluate the effectiveness of a Mobile Outreach and Crisis Service (MOCS) unit in remitting psychiatric symptomatology, improving global functioning, and decreasing homelessness in a population of homeless, severely mentally ill residing in a medium sized urban center. Using a time-lag study design, two groups of subjects – 25 individuals before receiving services (control group) and 25 individuals after receiving services (experimental group) – were contrasted across outcome measures. The results indicate that a MOCS unit using a Program for Assertive Community Treatment mode was effective in significantly decreasing psychiatric symptomatology, reducing homelessness, and increasing global functioning. When carefully implemented and interpreted, a time-lag design may be a means of providing valuable feedback and information in a timely manner.

Zabos GP, Trinh C. **Bringing the mountain to Mohammed: a mobile dental team serving a community-based program for people with HIV/AIDS.** Am J Public Health, 91(8):1187-9, Aug 2001.

In spite of the direct referral system and family-centered model of primary care linking medical and dental care providers, most HIV-positive patients at the Columbia Presbyterian Medical Center received only emergency and episodic dental care between 1993 and 1998. To improve access to dental care for HIV/AIDS patients, a mobile program, called WE CARE, was developed and collocated in community-based organizations serving HIV-infected people. WE CARE provided preventive, early intervention, and comprehensive oral health services to minorities, low-income women and children, homeless youths, gays and lesbians, transgender individuals, and victims of past abuse. More efforts to collocate dental services with

HIV/AIDS care at community-based organizations are urgently needed.

2000

Brito A, Wurm G, Delamater AM, Grus CL, Lopez-Hernandez C, Apple EB, Wanner A. **School-based identification of asthma in a low-income population.** Pediatr Pulmonol, 30(4):297-301, Oct 2000.

The increase in the prevalence, morbidity, and mortality of asthma among chi8ldren over the last decade has been well documented, especially among low-income minority children. Hypotheses for the increases in morbidity and mortality include limited access to primary care services and the failure to recognize the presence and severity of asthma. The University of Miami Pediatric Mobile Clinic (Mobile Clinic) Asthma Intervention Program is designed to identify underserved asthmatic children at school and offer them culturally sensitive care. Nine elementary schools with low income, predominantly Hispanic and African-American populations regularly served by the Mobile Clinic, were chosen for study participation. All 5,800 students who were enrolled in kindergarten through third grade were given letters at the time of registration by their homeroom teachers about the asthma program. Caretakers who returned the questionnaire and reported that the student had asthma symptoms were invited to have the student undergo a medial evaluation in the Mobile Clinic. Over a two-year period, caretakers pf 423 students (7.3% of all students) expressed an interest in further evaluating their child's health. The Mobile clinic physicians identified 145 of the enrollees as having asthma. These results indicate that in elementary schools serving predominantly low-income minority populations, a large fraction of the asthmatic population (estimated prevalence is 10%) can be identified by a school-based letter. Further, in a subset of asthma students (children of interested caretakers), there is good agreement between the caretaker responses and physician diagnosis of asthma. Since school attendance is mandatory, school-based methods may be an effective method for identifying low-income children with asthma.

Inman M. **Mobile contract services: what you need to know.** Radiol Manage, 22(5):38-42, Sep-Oct 2000.

With sufficient planning and ongoing attention to detail, the performance of a mobile imaging service provider can exceed expectations and requirements. The relationship can prove to be mutually agreeable and profitable for many years. But, when contracting mobile services, you cannot spend too much time on investigative research and detail. Several scenarios present outsourcing or mobile services as an acceptable alternative to purchase or lease: outdated equipment, novel or underutilized technologies, the need for incrementally added or temporary service. Look specifically for facilities that are comparable in size and volume to your facility. Expect that larger volume facilities will rate more favorable schedules or pricing. Obtain and check references. Require mobile service providers to adhere to the same state and federal laws, rules and regulations that govern your facility; receive the assurance of compliance in writing if it is not specifically addressed in the contract. JCAHO requires that contract service providers be governed by the same requirements as the accredited facility. Several other rules or licensing requirements may also pertain to mobile services. A prevailing reason for outsourcing imaging services is high equipment costs that cannot be justified with current volume projections. However, equipment quality should not be compromised; it must meet your needs and be in good repair. The mobile service provider you choose should be an extension of your department; quality standards must exist unilaterally. The mobile provider should also have patient education materials.

Poss JE. **Factors associated with participation by Mexican migrant farmworkers in a tuberculosis screening program.** Nurs Res, 49(1):20-8, Jan.-Feb. 2000.

BACKGROUND: Tuberculosis is an important public health concern among migrant farm workers in the United States; providing appropriate screening and treatment is difficult due to their highly mobile existence. PURPOSE: To analyze the relationship between variables (susceptibility, severity, barriers, benefits, cues to action, normative beliefs, subjective norm, attitude, and intention) from the Health Belief Model (HBM) and the Theory of Reasoned Action (TRA) and participation by Mexican migrant farm workers in a tuberculosis screening program. METHOD: A convenience sample of 206 migrant farm workers were recruited after a presentation of a tuberculosis education program and were tracked during the administration and reading of the tuberculosis skin test. Participants were interviewed in Spanish by the principal investigator using the Tuberculosis Interview Instrument (TII) developed for this study. RESULTS: Most subjects were male, aged 18-27 years, and had less than a sixth-grade education. Of the 206 subjects, 152 (73.4%) received the skin test, 149 (98%) had the skin test read, and 44 (29.5%) had positive skin tests. Based on logistic regression analysis, the model that best predicted intention included cues to action, subjective norm, susceptibility, and attitude. Participation in screening was best predicted by a model containing only two variables: intention and susceptibility. CONCLUSIONS: In this study, logistic regression analysis revealed that a more parsimonious model than the full HBM and TRA model accurately predicted both intention and behavior. The findings may be helpful in developing tuberculosis education and screening programs for Mexican migrant farmworkers.

1999

Brocht DF, Abbott PA, Smith CA, Valus KA, Berry SJ. **A clinic on wheels. A paradigm shift in the provision of care and the challenges of information infrastructure.** Comput Nurs, 7(3):109-13, May-June 1999.

The implementation of nontraditional healthcare delivery increases the need for information technology innovation, not only in use of computer-based patient records, but also in enabling infrastructures to support health information exchange. This is very apparent in mobile health clinics where care is provided to vulnerable community populations at locations far removed from academic and tertiary care settings. Several challenges of designing a computerized system for the University of Maryland School of Nursing's Wellmobile are addressed in this article, along with possible solutions. It is the authors' belief that implications for further study will become apparent as these constraints and challenges are described.

Ebberwein AM. **Mercy Mobile Health Care.** J Med Assoc Ga, 88(1):34-6, February 1999.

Frelix GD, Rosenblatt R, Solomon M, Vikram B. **Breast cancer screening in underserved women in the Bronx.** J Natl Med Assoc, 91(4):195-200, April 1999.

This article reports the results of mammography screening among socioeconomically disadvantaged women in Bronx, NY using a federally funded low-cost or no-cost cancer screening service. The New York State Department of Health provided funds for the unninsured through the Bronx Breast Health Partnership. All women <or= 40 years underwent screening mammography using both a mobile van unit and hospital-based mammographic x-ray unit, both American College of Radiology (ACR) accredited. Return visits were coordinated by a follow-up clinic at Montefiore Medical Center using a patient navigator who acted as an advocate for patients with abnormal screening findings. The overall detection rate of 12.9 per 1000 women screened was significantly higher than the New York State detection rate of 6 per 1000 and 5.1 per 1000 nationally. Availability of a patient navigator was an essential factor in the effectiveness of the work-up of problem cases. Low-cost or no-cost breast cancer screening programs can improve the availability, accessibility, acceptability, and utilization of mammography among underserved and uninsured women who are least likely to be screened otherwise.

McGee P, Barnard AM. **Meeting the needs of homeless people: the St John Ambulance mobile service.** Nurs Stand, 13(42):38-40, July 7-13, 1999.

St John Ambulance has a well established history of providing services to the community. This article describes the organization's first venture in meeting the needs of homeless people, focusing on the implications for qualified nurses.

Moulavi D, Bushy A, Peterson J, Stullenbarger E. **Factors to consider when buying a mobile health unit.** J Nurs Adm, 29(2):34-41, February 1999.

Purchasing a mobile unit to deliver healthcare services can be an expensive undertaking, and there is little information in the literature on planning or designing these vehicles. The authors discuss guidelines to help nurse administrators make better decisions regarding the purchase of mobile health units (MHUs). The guidelines resulted from a synthesis of the literature, correspondence with the chief executive officers of firms that manufacture MHUs, and onsite visits to agencies with an MHU.

Wilson KG, Seguin N, Goodman AM, Greene G, Pole M. **Rural health professionals' satisfaction with a rehabilitation mobile outreach program.** Arch Phys Med Rehabil, 80(3):332-8, March 1999.

OBJECTIVE: To assess the extent to which rural physicians and allied health professionals are satisfied with consultation services provided by an interdisciplinary rehabilitation outreach team. DESIGN: Descriptive survey. SETTING: A rehabilitation outreach team that travels to 14 rural communities in eastern and northern Ontario, Canada. SUBJECTS: Thirty-six rural physicians (response rate, 53.7%) and 62 allied health professionals (response rate, 92.5%) involved in the care of patients referred to the program. MAIN OUTCOME MEASURE: Consumer satisfaction questionnaire. RESULTS: Most respondents (94.7%) indicated that they were satisfied with the interdisciplinary consultation, with comparable rates of satisfaction reported by physicians and allied health professionals. The highest satisfaction ratings were given to items addressing the clarity of recommendations provided by team members and the quality of the team's interaction with patients. The lowest ratings were associated with the waiting time between visits. Of all the individual disciplines on the team, psychiatry was rated as most important for rural consultations. However, in open-ended comments, respondents indicated that the interdisciplinary aspect of the service was its most valued characteristic, whereas infrequent visits were the greatest drawback. CONCLUSION: The interdisciplinary outreach approach to rehabilitation consultation receives high satisfaction ratings from rural

health professionals who refer patients to the outreach team, which supports this model as a way to enhance rehabilitation services in rural communities.

Wray NP, Weiss TW, Christian CE, Menke T, Ashton CM, Hollingsworth JC. **The health status of veterans using mobile clinics in rural areas.** J Health Care Poor Underserved, 10(3):338-48, August 1999.

Between 1992 and 1994, the Department of Veterans Affairs (VA) experimented with mobile clinics to provide health care for rural veterans. The objective was to assess the health status of rural mobile clinics' patients and compare this with patients receiving care in VA hospital-based clinics. This study hypothesized that hospital-based clinic patients would be more ill (i.e., have a greater reduction in health status). The Medical Outcomes Study (MOS) Short Form was used to evaluate patients' health status. Most patients sought care for the management of chronic disease. Patients in both groups had similar types of diseases. Mobile clinic patients were as ill as hospital-based patients (i.e., similar health status scores). This study shows that rural veterans have a case mix and a reduction in health status similar to that of VA hospital-based patients. Planners should account for this health reduction when
planning the kinds of facilities and services needed in rural areas.

Wray NP, Weiss TW, Menke TJ, Gregor PJ, Ashton CM, Christian CE, Hollingsworth JC , **Evaluation of the VA mobile clinics demonstration project.** J Healthc Manag, 44(2):133-47, Mar-Apr. 1999.

In 1988 the Veterans' Benefits and Services Act attempted to solve the problem of the lack of adequate VA healthcare facilities in rural areas by establishing a demonstration program using mobile clinics. Six clinics operated in areas that were at least 100 miles from a VA healthcare facility during the time period between October 1, 1992 and May 28, 1994. This article evaluated the effect of the mobile clinics' structural limitations on clinical care, the increased number of sites on VA usage, and cost. Limited space for storage of medical records and the unavailability of laboratory, electrocardiographic, or radiographic facilities significantly affected clinical practice. However, even with these space limitations, veterans' use of healthcare in the areas served by the mobile clinics increased significantly in comparison to reference areas. The direct costs per visit averaged more than three times what the VA would have reimbursed the private sector.

1998

Alexy B; Elnitsky C. **Rural mobile health unit: outcomes.** Public Health Nursing 15(1): 3-11, 1998.

The Mobile Health Unit was implemented to increase access to nursing services, to improve and/or maintain functional status and health status, and to increase health promotion behaviors of rural elderly residents experiencing difficulty obtaining health care due to illness, transportation problems, or financial factors. For 222 project participants, 1,773 encounters were completed, with a mean number of visits per individual of 7.9. Participants in the project demonstrated increased breast and cervical cancer screening, increased immunization rates for influenza, pneumonia and tetanus, and decreased utilization of the emergency room. This project represents an alternative model of health care delivery in a rural area with limited resources and health care providers.

Chez N. **Nursing in the field. Mobile health units are an important part of bringing health care to communities**. Am J Nurs, 98(9):68-70, September 1998.

Kann PE; Bradley C; Lane,D. **Outcomes of recommendations for breast biopsies in women receiving mammograms from a county health van.** Public Health Reports, 113: 71-4, January-February 1998.

OBJECTIVE: To describe the outcomes of breast biopsy recommendations for women screened through a mobile mammography van. METHODS: Data on all women screened through the Mobile Mammography Program (MMP) in Suffolk Co., Long Island, NY, from 1990 to 1994 were analyzed to determine biopsy recommendation rates, biopsy rates, positive biopsy rates, and cancer detection rates. Follow-up information was obtained from the women's physicians. RESULTS: the breast cancer detection rate for women screened through the MMP averaged 0.33% over a five-year period. The biopsy recommendation rate based on abnormal mammograms remained stable, at about 1% to 2% over a five-year period, as did the rate of positive biopsies among women having biopsies (36.8% to 44.4%). For women ages 50 and older, the cancer rate in 1994 was .36%, while women younger than age 50, the cancer rate was 0.25% (0.32% for all ages). CONCLUSIONS: these findings show that a breast cancer screening program using a mobile van can have comparable cancer detection rate to national figures and a fairly stable biopsy recommendation rate from which follow-up resource needs can be estimated.

McCarley TD, Yates WR. **Mobile Outreach Crisis Services (MOCS): an innovative model taking psychiatric care into the community.** J Okla State Med Assoc, 91(8):452-6, Nov 1998.

Mobile outreach psychiatric services have become a popular model of providing care to the mentally ill. A mobile program has been instituted in Tulsa, Oklahoma, to provide care to homeless mentally ill in Tulsa County and to assist with emergency crisis intervention. Severely and persistently mentally ill persons have been a challenge for both medical and psychiatric providers, and MOCS was developed to address these problems. This article describes MOCS, briefly reviews recent literature, and discusses ways this program can benefit primary care physicians.

Redlener I. **Access denied: taking action for medically underserved children.** J Urban Health, 75(4):724-31, December 1998.

Spanowicz MJ, Millsap G, McNamee MJ, Bartek JK. **Health problems of sheltered homeless men using a mobile health van: a 4-year study.** Clin Excell Nurse Pract, Sep;2(5):279-85, 1998.

The number of homeless persons in the United States is increasing on an annual basis, with men accounting for the greatest number. Accessing health care for this group is difficult for many reasons, particularly those related to finances, transportation, lack of insurance, and transiency of lifestyle. Consequently, data regarding homeless men's health problems/concerns are difficult to obtain, and often the information reported is only for acute care services provided by emergency rooms and clinics. The purpose of this study was to determine the demographic characteristics and health problems/concerns of sheltered homeless men using the services of a mobile van for health care over a 4-year period. A total of 2,086 records, representing 1,171 men aged 19 and over, were retrospectively reviewed to determine demographic and health characteristics (age, sex, self-reported medical and addiction histories, and self-reported medication use). Data on presenting concerns, diagnoses, visit patterns, treatments, medications and teaching provided were also collected and analyzed.

Recommendations to improve the quality, continuity, and follow-up of care for homeless men are included.

Stewart RE. **Dental care for the underserved children of Monterey County: meeting the challenge.** J Calif Dent Assoc, 26(5):394-6, May 1998.

With its expansive area, and the special needs of agricultural workers, Monterey County held significant challenges for setting up a children's health clinic. Part of the solution to addressing the county's unmet dental needs was the establishment of the Children's Miracle Network dental center in 1995. But working in the fields leaves little time for travel to appointments, so the dental center expanded to a mobile unit that can go where the need is. Understanding the special needs of one's community is crucial to establishing programs that can successfully address the state's needs for children's dental care.

1997

Ayres D. **Mobile medical clinics offer alternative to renovation and construction.** Ambul Outreach, 31-2, Fall 1997.

Mobile Health Care Programs have many attributes. Every organization genuinely concerned with client access to their services should consider having one. When the need to service outlying areas arises, a mobile clinic offers more flexibility and is the most economically feasible alternative. Granted, here is no shortage of vacant structures for rent or purchase in rural America. That, of course, is just the start; you also have the expense of renovating the interior to accommodate the patients and staff. And do not forget the four P's: Planners, Permits, Politics and Payola (taxes and fees).

Clinica Sierra Vista. **Mobile health services**. Lamont, CA: Clinica Sierra Vista, 1997.

Clinica Sierra Vista=s Mobile Health Services was created in order to deliver medial and social services to thousands of poor adults, children and families who are unable or unwilling to access traditional health care delivery systems. This brochure briefly describes its program.

Soderstrom E; Long T; Sherman J. **MoVES: incorporating developmental services on a pediatric mobile health care clinic.** Infants and Young Children, 9(3): 78-86, 1997.

The Mobile Van Evaluation and Screening (MoVES) program was established in 1994 to provide developmental screening and evaluation services to the children receiving primary pediatric medical care from the Georgetown University Pediatric Mobile Clinic. The program grew rapidly and presently consists of an array of developmental services in addition to evaluation and screening. The purpose of this article is to describe the developmental services that have been established as part of a pediatric mobile health care clinic. A descriptive analysis of the children seen during the first year of the program will also be provided.

1996

Alexy B; Elnitsky C. **Community outreach: rural mobile health unit.** Journal of Nursing Administration, 26(12): 38-42, 1996.

With the increased emphasis on cost containment, hospital administrators are investigating community outreach projects to remain economically viable. The authors describe the planning and implementation of a mobile health unit for rural elderly residents. This project represents an alternative model of health care delivery in a rural area with limited resources and health care providers.

Dyer JJ. **Comparative costs of mobile and fixed-clinic primary health care services**. S Afr Med J, 86:528-30, May 1996.

With restructuring and rationalization of health services in South Africa imminent, the development of methods for comparing and evaluating health services is of great importance at both national and local level, including comparisons of cost-efficiency and cost-effectiveness. The costs of different methods of delivering primary health care in a local authority through mobile and fixed-clinic services have been analyzed and aspects of their cost-efficiency compared. The information gained from such an analysis can be used for management purposes to optimize both the use of resources and the quality of service provided at local level.

Foti SK. **A clinic that heals the homeless.** Hospitals & Health Networks, p.84: March 20, 1996.

The author describes the Health Care Center for the Homeless in Winter Park, Fla. Patients ailments range from cancer to rashes and foot sores. Much of the financing comes from the Robert Wood Johnson Foundation, local hospitals and private benefactors. Doctors, nurses, and dentists donate their time and a mobile medical van provides outreach.

McNeal GJ. **Mobile health care for those at risk**. N Hc Perspect Community, 17:134-40, May-June 1996.

Vellozzi CJ; Romans M; Rothenberg RB. **Delivering breast and cervical cancer screening services to underserved women: Part I. Literature review and telephone survey**. Womens Health Issues, 6(2):65-73, March-April 1996.

Although breast and cervical cancer screening procedures have been shown to reduce morbidity and mortality, many women are not using these services. These women are likely to be older, of ethnic or racial minority, of low socioeconomic status, less educated, underinsured, or living in rural locations. Many breast and cervical cancer screening programs employ strategies to increase use. To identify and assess those strategies, we reviewed the literature and completed a telephone survey, altogether assessing 61 programs. Our study found that not all strategies work for all women. Management systems directed to both patients and providers consistently are effective for most underserved women. Community-based outreach and integration of preventive services at the primary health care (PHC) site are effective strategies for both African American and Hispanic women. Use of mass media has been successful when targeted toward Hispanic women, but not when targeted toward African American women. Mobile units and integration of preventive services at PHC sites are effective strategies for elderly women. In many cases, a combination of strategies may be effective. y

1995

Garrett DK. **Mobile access: opening health care doors**. Nurs Manage, 26:29, 31-3, October 1995.

By combining traditional services and resources, the HealthQuest mobile van travels through six counties in northeast Indiana to reach those who have no easy access to health care. Existing programs that focus on meeting the needs of infants, children and adults living in rural communities via the use of mobile primary care vans are reviewed as well as this recently developed program.

McGee D; Morgan M; McNamee MJ; Bartek JK. **Use of a mobile health van by a vulnerable population: homeless sheltered women**. Health Care Women Int, 16:451-61, Sept.-Oct. 1995

In this study, we examined the health problems of and services provided to sheltered, homeless, Midwestern women who used a mobile health van. Our objectives were to document these women's ages, self-reported past medical histories, self-reported histories of addictions and hospitalizations, presenting concerns, diagnoses, and visit patterns. We performed a retrospective review of the 689 records of 408 women who had sought care during a three-year period. The data were divided into three groups, representing women ages 15-25 (n=111), 26-40 (n=211), and 41-70 (n=86). In all three age groups, respiratory disorders were most frequently treated. Preventive health maintenance concerns were also major concerns of all age groups. Recommendations for improving the quality, continuity, and follow-up of care are offered.

1994

Altice FL; Selwyn PA; Singh R; Zampano C; Friedland G. **Linking mobile health services to the New Haven needle exchange program (NEP)**. Int Conf AIDS, 10:335 (abstract no. PD0519), Aug. 7-12, 1994.

OBJECTIVES: To describe demographics, patterns of health service utilization and social services of NEP clients and to evaluate NEP-linked medical, social and HIV testing services for IDUs and community residents. METHODS: Linkage of mobile medical services with bilingual staff to an NEP was first established in the United States in January 1993 and data analyzed for the study period January 1993 to February 1994. Demographic and utilization data for all encounters were entered into an onsite computer database. Each client encounter generated up to three diagnoses (dxs) which were later grouped as Infectious Diseases (ID), Substance Abuse (SA), or Primary Care (PC)-related. RESULTS: Of 189 clients, 153 (81%) were non-white and 35% were female. NEP users comprised 112/281 (40%) of all patient visits, however 5% were not IDUs. Overall, there were 1.5 visits/client vs. 3.1 for HIV+s and 2.5 for IDUs. Of 281 visits, 195 (69%) were PC, 11% were ID and 20% were SA-related. ID-related dxs were more common among known HIV+s and homeless clients, and IDUs mostly had SA-related conditions. Medical follow-up referrals were made for 52% of clients (59% complied). Social service referrals were made for 39% (54% complied). Of 75 tested, 5% were HIV+ and 64% returned for HIV counseling results. Though Latino/as accounted for only

14% of medical encounters, they consisted of (55%) of those HIV tested. CONCLUSIONS: Mobile health services can be linked to NEPs to provide services to IDUs and other high risk residents who don't use existing health care services. The high rate of linkage to existing medical services demonstrates the viability of innovative NEP based medical services for those not accessing traditional care, especially IDUs and HIV+s. Although HIV+s had increased ID-related dxs, PC-related dxs were most frequent overall indicating that routine existing medical services are not sufficient for these high risk populations. Mobile testing was well accepted by clients and used mostly by women and Latinos/as. Further interventions are needed to enhance the ability of this population to access these services.

Barry M; Fleck E; Lentz S; Bell C; O'Connor P; Horwitz R.**"Medicine on wheels": an opportunity for outreach and housestaff education**. Conn Med, 58:535-9, September 1994.

Ambulatory-care teaching programs have been traditionally based in hospital settings. As many patients, in particular the homeless and underinsured, have never reached these settings, we describe a nontraditional outreach health care program for medical residents. This multidisciplinary program places medical residents on a mobile van to deliver care to a population in New Haven where 18.2% of its families are below the poverty level and have limited or no access to health care at the teaching hospital. On-site urgent care is given along with HIV, pregnancy testing, and blood pressure screening. Health care follow-up, dental care, alcohol detoxification, and drug counseling are scheduled. A total of 764 adult patients were seen between November 1991 and June 1993 by PGY2 residents on ambulatory rotations. One hundred forty-one patients consented to respond to a questionnaire. Thirty-seven (26%) were homeless with a mean length of homelessness of 15 months. Forty-one percent had been victimized within one year and 33% currently used illicit drugs. The benefits of this unique ambulatory teaching program for medical residents are described.

Etzi S; Lane DS; Grimson R. **The use of mammography vans by low-income women: the accuracy of self-reports**. Am J Public Health, 84:107-9, January 1994.

This study looked at the accuracy of self-reports of mammography use by low income women. Van records were used to verify self-reports of mammography use in the past year by women aged 50 through 75 who had visited five community health centers (n=237). Van records verified mammography use for 99% of these women (82% within the previous year and 98% within the past two years). Forty percent of those with van records who reported both the month and year of the mammogram were accurate. Inaccurately reported dates were more frequently after (74%) rather than before (26%) the actual date. These findings indicate that self-reports of mammography use by low-income women are generally reliable.

King PC Jr. **Delivering care to the streets.** Health Prog, 75(9):36-8, Nov 1994.

St. Francis Hospital's management team has collaborated with other community organizations to respond to the very real needs of the homeless and indigent in Wilmington, Delaware. St. Francis Hospital has developed two innovative programs, St. Clare Medical Outreach and Tiny Steps. Recognizing that the poor and indigent find transportation, clinic schedules, and intimidating paperwork to be major barriers to health care, St. Francis Hospital and its partner in this collaborative ministry, Ministry of Caring, sought a creative approach that would bring health care to Wilmington's needy in a nonthreatening way, while also offering continuity of care. St. Clare Medical Outreach van staff began administering much needed health care services on April 27, 1992. For years, St. Francis Hospital has supported a pediatric clinic at West End Neighborhood House, an organization offering a variety of family-related services to the indigent. In September 1992, the hospital

collaborated with other community organizations to offer a more comprehensive, holistic health care service . This joint venture of St. Francis Hospital and 11 other community organizations is designed to lower the infant mortality rate by identifying high-risk pregnancies early on and managing complications during pregnancy and after birth.

McDonald T; Chapman RD; MacKenzie J. **Primary health care rendered from mobile units: can computers help?** Curationis, 17:35-8, June 1994.

The object of survey was to assess which aspects of the nurses' work in mobile clinics could be computerized with a beneficial effect on the quality of work. This paper is an analysis of how much time the nursing staff spent on various tasks. The results show that nurses are satisfied with their work, even in the face of difficult working conditions and a high workload. It was also found that computer and communications technology can promote greater efficiency in activities that represent 35% of a nurse's time.

McNamee MJ; Bartek JK; Lynes D. **Health problems of sheltered homeless children using mobile health services**. Issues Compr Pediatr Nurs, 17:233-42, Oct.-Dec. 1994.

Homeless families are an increasing problem in the United States, with children representing 34% of the total homeless population. This retrospective study describes the demographic characteristics and health care problems and concerns of sheltered homeless children who used the services of a mobile health van over a one-year period in a midwestern metropolitan area. The patterns of utilization, medications prescribed, and referrals are also described. Medical records of 175 sheltered homeless children who sought care from a mobile health van were reviewed. Forty-eight percent of the children were female; 52% were male. The majority were under six years of age (15% infants, 22% toddlers, 22% preschoolers, 23% school-age children, and 18% adolescents). The major reasons for seeking health care, the primary diagnoses, and treatments are presented. Recommendations for using a mobile van to provide efficient, quality health care for this population are discussed.

Paris N; Porter-O=Grady T. **Health on wheels**. Health Progress, 75(9): 34-5, 41, November 1994.

To adequately meet the needs of the poor and underserved, we must bring health care services to them. Saint Joseph=s Hospital in Atlanta, Ga., is doing that through its Mercy Mobile Health Program. Even though Mercy Mobile has been available for a decade, the health status of Atlanta=s homeless and working poor has deteriorated. The program has increased its services to include primary care, disease prevention, health promotion, case management, and information and referral. With four vans and two mobile clinics, the program operates five days and three evenings a week, often in a space donated by churches and other non-profit organizations. It provided more than 50,000 episodes of care last year. Developing strategies and resources to treat medically-at-risk, hard-to-reach clients with multiple diagnoses is a complex task, requiring resources of more than one organization. One example of an effective collaboration effort is the Street Home program for HIV-infected homeless persons. This program provides early intervention and primary care to persons with HIV and is funded through the federal Ryan White CARE Act.

Redlener I; Redlener KB. **System-based mobile primary pediatric care for homeless children: the anatomy of a working program**. Bull N Y Acad Med, 71:49-57, Summer 1994.

This article describes the New York Children's Health Project (NYCHP) of Montefiore Medical Center-Albert

Einstein College of Medicine in Bronx, N.Y. The project has been providing comprehensive health services to homeless and medically underserved children since 1987. Fully equipped mobile child health offices have been the principal mechanism for bringing pediatrician-led teams to locations that are convenient and accessible to underserved children and their families.

Reguero W; Crane M. **Project MotherCare: one hospital's response to the high perinatal death rate in New Haven, CT.** Public Health Rep, 109(5):647-52, September-October 1994.

Starling national statistics indicate that New Haven, CT, is the seventh poorest city of its size, in terms of per capita income, in the United States. In 1989, it was reported to have the highest rate of infant mortality--18.5 infant deaths per 1,000 live birth--in the nation for a city with more than 100,000 people. Seventy-five percent of all perinatal deaths are attributed to low birth weight infants. Adequate prenatal care is a proven means of reducing this risk. To further compound the problem, substance abuse among pregnant women has increased dramatically. Census tract data revealed that many of the infant deaths were localized to several well-defined areas of the city. Forty-four percent of the infant deaths were ascribed to extreme immaturity or other causes related to low birth weight. Approximately 21%of the pregnant population had either no prenatal care or care was begun late--after the first trimester. The traditional avenues for prenatal care have been ineffective; an innovative approach, one that can be replicated, was initiated. The Hospital of Saint Raphael's "Project MotherCare" embarked on an initiative to address these problems by reducing the access barriers to prenatal care regardless of insurance status or ability to pay. The mission was twofold: (1) bring prenatal care to underserved neighborhoods of New Haven and (2) identify the substance-abusing pregnant woman and deliver a continuum of services including prenatal care, counseling, social services, and referral to a drug treatment program.

Slagg NB; Lyons JS; Cook JA; Wasmer DJ; Ruth A. **A profile of clients served by a mobile outreach program for homeless mentally ill persons**. Hosp Community Psychiatry, 45:1139-41, November 1994.

According to the authors, mobile outreach and crisis services, which have proven effective for persons with mental illnesses, have also proven effective for homeless persons with mental illnesses but are not sufficiently available. This article describes the services offered and the population served by a mobile assessment program in its first 24 months of operation. The mobile assessment program was established in 1990 by Thresholds and serves a catchment area encompassing urban Chicago, Ill.

1993

Boettcher JH. **Promoting maternal infant health in rural communities. The Rural Health Outreach Program**. Nurs Clin North Am, 28(1):199-209, March 1993.

RHOP is a nurse-managed community-based program that uses a variety of approaches to reduce infant mortality and improve maternal child health. In a rural area, representative of much of the rural South, which has a persistent record of poor maternal-child outcomes, the program is using university and community resources to make a difference. The goal is to empower the community to help it help itself using all the available resources. The initial outcome data indicate that these positive changes are happening and can be the site for future activities by those in the community as well as the university. Future plans include involving more departments at the university in the program and expanding services to three additional counties. Graduate students and faculty are becoming interested in conducting research using RHOP activities as a

base, and future grants are being considered to expand into new areas such as substance abuse and cancer prevention.

Colomo C; Estebanez P; Merodio C; Fitch K; Munoz M; Garcia Lalinde G. **Mobile unit for syringe exchange and condom distribution in a health education program**. Int Conf AIDS, 9:748 (abstract no. PO-C24-3187), June 6-11, 1993.

INTRODUCTION/JUSTIFICATION: The AIDS epidemic is having an alarming effect on the injecting drug using (IDU) population of our country. All studies conclude that the main risk factor in this population is sharing syringes. OBJECTIVE: To help prevent and control the epidemic of AIDS and other infectious-contagious diseases in IDU, their partners and their children. ACTIVITIES/CHRONOGRAM: January to March 1991: Analysis of the situation and selection of sites for action; recruitment and training of personnel: contacts with groups, associations, organizations and institutions related with the target groups, explaining objectives and requesting support; publicity about the program; purchase of materials; preparation of explanatory booklets. From April 1992: Action in selected sites during the evening of a fixed day of the week in each site; collection of indicators for evaluation. HUMAN RESOURCES: Core team consisted of one paid social worker and three paid street health educators. This team was supported by more than 40 volunteers (physicians, health aides, psychologists, sociologists, students and housewives). MATERIAL RESOURCES: Nissan Trade 2.0 Capitone Van; sterile injection equipment with syringes, needles, envelopes with alcohol, plastic ampules of distilled water; condoms; containers to collect syringes to be destroyed; pamphlets; forms for referral to other health services; anonymous registration forms to collect basic sociodemographic data. RESULTS: Evaluation as of Dec.30, 1992: Number of visits made - 7,322 (1,745 new clients; 5,416 repeat clients; 167 not available). Number of used syringes returned - 20,726. Ratio of used syringes returned to injection kits distributed in first month - 936/4,350 (21%); in most recent month - 70% (2,603/3,694). Number of condoms distributed - 17,418. Number of referrals to other health services - 473. EVALUATION: Of particular note is the users interest in and respect for the program and team. There have been no conflicts or social or political confrontation thanks to the ground work done previously. CONCLUSIONS: Similar programs should be carried out to make sterile infection equipment more widely accessible, to carry out health education, and to serve as a bridge making social and health services more easily accessible to these groups.

Johnston LM. **For the benefit of the sick: lessons from the Travelers Aid Medical Van**. R I Med, 76:111-3, March 1993.

Johnstone H; Tornabene M; Marcinak J. **Incidence of sexually transmitted diseases and Pap smear results in female homeless clients from the Chicago Health Outreach Project**. Health Care Women Int, 14(3):293-9, May-June 1993.

Homeless persons have difficulty gaining access to health care. In 1985 the Chicago Health Outreach Project was created to improve their access to health care. Staff and client reviews indicated that female homeless clients required increased outreach efforts. Consequently, a mobile women's health unit was developed in 1990. Review of 128 records of 104 female homeless clients indicated that 30% of Pap smears done were abnormal, with atypia (14%) and inflammation (10%) the most common findings. The incidence of chlamydia, gonorrhea, and trichomoniasis was 3%, 6%, and 26%, respectively. There was a significant association between the presence of trichomoniasis and an abnormal Pap smear. These results emphasize the importance of providing regular gynecological care to homeless women. Research is needed on the implications of abnormal Pap smears and sexually transmitted diseases for this population of female homeless

clients.

Redlener I. **Overcoming barriers to health access for medically underserved children**. J Ambulatory Care Management, 16(1): 21-28, 1993.

As many as 5,200 families, including about 12,000 children, are homeless on any given night in New York City. Over the course of a year, 20,000 to 25,000 children are officially identified as homeless. A study of 650 children in early 1992 found only one-third had up-to-date immunizations; 28% had asthma; 47% had had otitis media within 18 months; 19% had anemia; 32% had visited a hospital emergency department; 6% had been hospital inpatients within three months; only 9% had private physicians; and 62% were receiving hospital-based services as a normal mode of care. In response to the medical needs of homeless children, the New York Children=s Health Project (NYCHP) was initiated in 1987. NYCHP operates three mobile medical units that visit 15 sites in New York City. Range of services include comprehensive care, primary care follow-up, case management and gatekeeping functions, and medical records management.

Stein LM. **Health care delivery to farmworkers in the Southwest: an innovative nursing clinic**. J Am Acad Nurse Pract, 5(3):119-24, May-June 1993.

The migrant and seasonal farmworkers of the United States constitute a medically underserved population with many health care needs. Barriers to health care among farmworker families include financial constraints, cultural factors, restrictive labor practices, and absence of accessible clinics in rural areas. The Migrant Health Outreach Program is a federally funded mobile nursing clinic created to deliver health care to farmworkers where they live and work. The Migrant Health Outreach Team, composed of family nurse practitioners, registered nurses, and health care workers, offers primary care including health care maintenance and treatment of acute and chronic illness. The mobile nursing clinic serves the target population of farmworkers as a successful alternative to a traditional medical clinic.

1992

Crombie D. **Medical van finds the AForgotten City.@** Providence Journal-Bulletin, May 7, 1992.

This newspaper article reports on the mobile medical van that is operated by the Travelers Aids of Providence, RI.

Diaz E Jr. **Mobile street-based HIV antibody testing**. International Conf on AIDS, 8(2): C335, July 19-24, 1992. (abstract no PoC 4544).

ISSUE/PROBLEM: Hard-to-reach populations in the United States, including African-American, Asian and Pacific Islanders, Native Americans, Latinos, women, injection drug users, and homeless persons have not sought HIV antibody testing. As a result, people who are at risk for HIV infection are not getting tested and entering early intervention programs for medical care and psychological support. DESCRIPTION OF THE PROJECT: The UCSF AIDS Health Project administers the HIV antibody testing program in San Francisco,

Calif., at six stationary sites. AHP has collaborated with local community agencies to provide mobile street-based antibody testing at local community events, street and health fairs, schools, and community centers. These events are presented in a culturally sensitive context by using bilingual staff, linguistically appropriate materials, and outreach workers who are familiar with the target population. RESULTS: since the beginning of the mobile testing program in October 1990, eight mobile events have been conducted. The percentage of first-time testers (60%) is double the rate of the stationary sites. The percentage of women and ethnic minorities has also increased significantly. A survey of people tested found that the two main factors that encouraged testing were the convenience and anonymity of testing. Half of the respondents also said that they did not know the location of the fixed sites. LESSONS LEARNED: Participants will learn about a creative and exciting approach to bring HIV testing to the streets to reach populations that have not traditionally accessed health care systems.

Edwards R; Ramsey S. **Health visiting on a playbus: a community approach**. Health Visit, 65:169-70, May 1992.

Inappropriate and overcrowded housing, poverty and lack of social support can affect the health and development of young children and their mothers. Such factors may prevent those families who most need health resources from using them. Rosalind Edwards and Stephanie Ramsey describe a project that attempts to encourage the use of health-related information by families with young children through taking an inter-agency and community-based approach.

McManus J; Monajem S; Dincer E. **Mobile mission**. N Y State Dent J, 58:51-2, February 1992.

The "Big Blue" van of The Children's Aid Society brings much needed health services to homeless and underserved children of New York City.

1991

Higgins SJ; Walls EA; Fisher AG; Smith DC; Humphries TJ. **The establishment and validation of the mobile immunization team concept at a clinic level**. Mil Med, 156:53-5, February 1991.

Faced with unacceptably low and declining overall immunization compliance, as well as specific flu immunization compliance, the Executive Committee of a 32-person Air National Guard clinic asked the nursing service to devise a method of correcting these deficiencies as rapidly as possible and maintaining immunization compliance at a rate of 90% or better of the total patient population of approximately 1,100 full-time and Guard personnel for whom the clinic was responsible. The concept of a mobile immunization team was devised and validated over a two-year interval. In order to successfully develop and implement this concept, command emphasis and a high level of cooperation from both clinic personnel and the Unit Commanders involved was requested and received. The make-up of the team, risk management, the timing and place of team visits, and record keeping were among the problems addressed and resolved. The mobile immunization team concept was a success, achieving excellent overall immunization compliance and outstanding compliance with the flu immunization program over a two-year period.

Lindy DC; Pessin N; Hill R; Hyer K. **Visiting Nurse Service of New York: the Mobile Crisis Service**. Caring, 10(3): 29-31, March 1991.

Pessin N; Lindy D; Hyer K; Dehm K. **Visiting Nurse Service of New York: bring the mental health clinic to the home.** Caring, 10(3): 24-8, March 1991.

The Community Mental Health Services Division of VNS Home Care, N.Y., has evolved from a single mobile crisis program to a wide array of services for children, adults, and elderly persons, addressing both acute and chronic psychiatric problems.

1990

Knight K; Christopher MA. **A mobile clinic for the homeless and mentally ill: meeting the needs of a target population**. Caring, 9(9): 68-9, 75-7, September 1990.

Patti J; McDonough K; Porter-O=Grady T. **Streetside support**. Health Progress, 71(5): 60-2, June 1990.

Five years ago a small group of employees (health professional and others) from Saint Joseph=s Hospital, in Atlanta, Ga., volunteered to prepare a meal for the homeless at one of the city=s shelters. The experience led to a group decision to volunteer time to provide basic health care to the homeless. This soon led to the hospital-based Mercy Mobile Health Project which, with community involvement, eventually became the Atlanta Community Health Program for the Homeless. Although the Saint Joseph=s Mercy Care Corporation sponsors the program, a number of public and private agencies and professional groups are involved. All strive to expand efforts to address the problems of the homeless, to break the cycle of homelessness, and to provide continuing health care services where necessary. The number of clinic sites has more than doubled, while patient encounters have quadrupled.

1989

Gerstner L; DeBrocky S; Bassano JM. **Mobile services in the Bronx**. Health Progress, 70(8): 86-8, October 1989.

Ramsden SS; Nyiri P; Bridgewater J; el-Kabir DJ. **A mobile surgery for single homeless people in London**. BMJ, 298(6670): 372-4, February 11, 1989.

Little is known about the social and medical characteristics of people who regularly sleep rough, or whether medical care can be targeted to these people. In 1987, a mobile medical unit was used to provide primary

health care at two sites in central London where many single homeless people sleep outdoors. One hundred forty-six patients were seen with illnesses ranging from scabies to osteomyelitis and tuberculosis. Sociodemographic data showed the patients to be generally an isolated group with deprived and unstable backgrounds. This was often compounded by alcohol abuse. Over a third of the patients from one site attended a drop-in center for homeless people in Soho within a month after seeing a doctor in the mobile medical unit. This suggests that the project can be a first stop in integrating this isolated group with health care facilities.

1986

Putnam JF; Cohen NL; Sullivan AM. **Innovative outreach services for the homeless mentally ill.** International Journal of Mental Health 14(4):112-124, 1986.

This article describes the Homeless Emergency Liaison Project (HELP) in New York City. HELP is a mobile psychiatric outreach team that provides crisis services to people living on the streets, including involuntary transport of mentally ll homeless persons to a hospital for psychiatric evaluation. The article describes the characteristics of HELP's clients, the risk categories used to develop treatment plans, and the need for a continuum of services for homeless mentally ill individuals.

1983

Oboler SK; Blieden MA; Carter SA; Jahnigen DW; Luck TC; Mathew M; Meyer TJ; Robbins LJ; Ahern TR; LaForce FM. **A mobile internal medicine clinic**. Arch Intern Med, 143:97-9, January 1983.

The Denver V.A. Medical Center (DVAMC) established a mobile internal medicine clinic (MediVAn) to provide access to primary care for veterans living more than 50 miles from the center and to study the costs of such a program. A fully equipped van staffed by an internist visited four Colorado cities weekly for scheduled appointments. In the first two years of operation there were 4,655 visits by 766 veterans with a mean age of 56 years, with 3.9 diagnoses, and receiving 3.0 medicines. The cost per MediVAn visit was $68, compared with $67 per outpatient visit at DVAMC. We conclude that a mobile medical clinic is a convenient method of delivering primary care over distances and is comparable in cost to outpatient hospital visits.

Undated

Mobile Health Service: Clinica Sierra Vista. Video Magic, Bakerfield, CA (videotape/9 min.)

Clinica Sierra Vista's Mobile Health Service delivers medical and social services to thousands of poor adult, children, and families who are unable or unwilling to access traditional health systems. This video shows a picture of the services provided through a 40-foot fully-equipped clinic that began operating in April 1996. Traveling to sites where homeless people congregate, such as shelters and farm labor camps, and collaborating with local social services, the mobile van is a "rolling billboard" for the homeless health care program.

San Fernando Valley Mobile Homeless Center. Los Angeles Family Housing Corporation, North Hollywood, CA. (Videotape/4 min.)

The mobile unit provides services to homeless and near-homeless persons in the San Fernando Valley, traveling to encampment sites, homeless service agencies and church feeding programs. The video shows how mobile outreach can be an effective tool to reach people who are resistant to services. AVAILABLE FROM: Los Angeles Family Housing Corp., 7843 Lankershim Blvd., North Hollywood, CA 91605.

St. Joseph's Mercy Care Services. **Mercy Mobile Health Program.** Atlanta, GA: St. Joseph's Mercy Care Services. (Program Description)

This program manual provides the following information about the Mercy Mobile Health Program: (1) history of the program; (2) philosophy of care; (3) target population of persons who are homeless or at risk of homelessness; (4) model of an interdisciplinary program which includes health care, education, and social services; (5) administrative policies and procedures; and (6) organizational context through which the program is supported.